DOCUMENT RESUME

ED 073 062 SP 006 051

AUTHOR Mohan, Madan; Hull, Ronald E.
TITLE An Evaluation of the '72 Summer Workshop on Individualized Instruction.
INSTITUTION State Univ. of New York, Fredonia. Teacher Education Research Center.
PUB DATE Dec 72
NOTE 52p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Educational Objectives; *Individualized Curriculum; *Individualized Instruction; *Individualized Programs; Teacher Attitudes; *Teacher Education; *Teacher Programs

ABSTRACT

This report evaluated a 2-week summer workshop for 37 teachers, supervisors, and administrators involved in the study and implementation of individualized instruction programs in western New York. After a brief introduction, general objectives and planning procedures of the workshop were presented. Participation selection was based on a questionnaire designed to investigate backgrounds, interests, and attitudes toward individualized instruction. An assessment of this questionnaire resulted in the following areas of study covered in the workshop: overview of individualized instruction; curriculum adjustment for individualized instruction; skills training; objectives and organization of individualized instruction; systems of individualized instruction with emphasis on individually guided education, motivation, grouping, scheduling, assessment, and reporting for individualized instruction. The report presented the daily schedules of the workshop. The resulting success of the workshop was reported in two tables of data on the cognitive mastery level in each content area. The results showed an effective change in cognitive behavior in most of the participants. A post-workshop attitudinal questionnaire revealed that the participants' view of the workshop was highly beneficial. Suggestions for future workshops were made and the participant biographical and attitudinal questionnaires were included. The materials used in the workshop were also presented along with correspondence to the participants. (BRB)

NOV 21 1972

ED 073062

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

AN EVALUATION OF THE '72 SUMMER WORKSHOP ON INDIVIDUALIZED INSTRUCTION

Madan Mohan

and

Ronald E. Hull

December, 1972

Teacher Education Research Center

State University College

Fredonia, New York

SP 006 051

TABLE OF CONTENTS

	Page
Foreword	i
Individualized Instruction and Learning Model	iii
Workshop Participants	iv
SUC, Fredonia Summer Workshop Personnel	vi
Introduction	1
General Objectives	2
Planning Procedures	3
Criteria for Grading Workshop Participants	6
Operational Procedures	8
Results	16
Discussion	24
Suggestions for Future Activities	29
References	31
Appendix A - Participant Biographical Questionnaire	32
Appendix B - Evaluation of Workshop on Individualized Instruction	34
Appendix C - Materials Used in the Workshop	37
Appendix D - Letters to Participants	40

FOREWORD

The two-week Summer Workshop on Individualized Instruction was offered at the State University College at Fredonia during the period of July 24 through August 4, 1972, through the co-operative efforts of the Teacher Education Research Center, the Department of Education and the Southwestern Association for the Improvement of Instruction. The workshop (Educ. 590) carried 3 hours of graduate credit.

Participants were selected primarily from school districts currently involved in the study and implementation of programs of individualized instruction in Western New York. Thirty-seven teachers, supervisors, and administrators representing a dozen school districts participated. Much of the success of the workshop was due to the encouragement and support of the administration in these school districts.

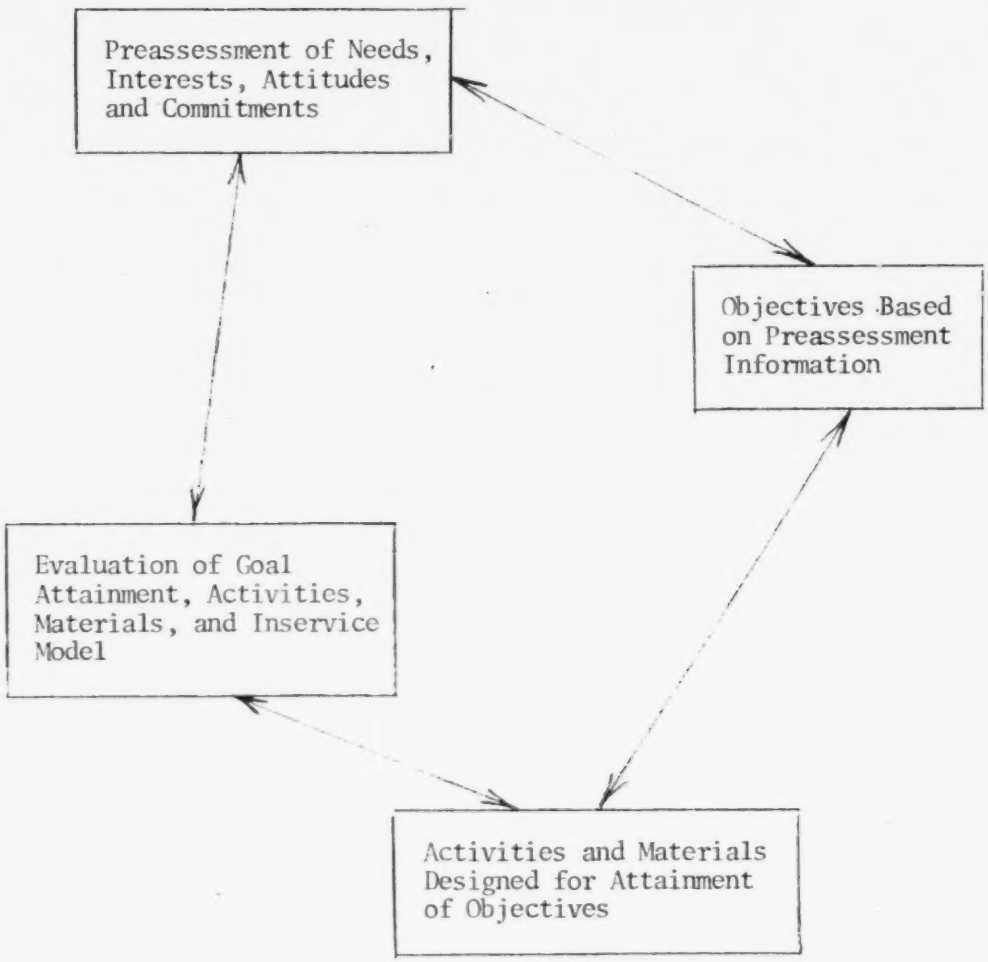
The model upon which the workshop was based was consistent with generally accepted principles and concepts of individualized instruction and individualized learning (see p.iii). An effort was made to implement the Individualized Instruction and Learning Model. This evaluation report will indicate the degree to which this goal was fulfilled.

We appreciate the encouragement and support of Dean Joseph V. Totaro and Dr. Donald McFarland, Chairman of the Education Department, in planning and scheduling this workshop as a graduate credit course offering. Special thanks is due to the workshop personnel listed on page vi who generously gave of their time to make presentations and assist in the conduct of the workshop. It is hoped that this workshop will set a precedent and also will provide guidelines for future graduate and undergraduate credit workshops on individualized instruction and individualized learning.

Special thanks are due Chris Halas and Marian Anderson for their assistance in the preparation of the manuscript.

Kenneth G. Nelson, Director
Teacher Education Research Center
State University College, Fredonia

Individualized Instruction and Learning Model


Preassessment of Needs, Interests, Attitudes and Commitments
Objectives Based on Preassessment Information
Activities and Materials Designed for Attainment of Objectives
Evaluation of Goal Attainment, Activities, Materials, and Inservice Model

Workshop Participants

Rosella Allenza
511 Deer St.
Dunkirk, N.Y. 14048

John Ames
R.D. #2
Dunkirk, N.Y. 14048

Catherine Baus
226 Crossman St.
Jamestown, N.Y. 14701

Ruth Blank
W. Main Rd.
Fredonia, N.Y. 14063

Margaret Boyd
43 Douglas St.
Fredonia, N.Y. 14063

Kathryn Calimeri
410 E5
Jamestown, N.Y. 14701

Celeste Coggiola
14 William Street
Falconer, N.Y. 14733

Rudolf Donn
R.D. #1
Kennedy, N.Y. 14747

Kenneth Dowd
195 E. Genesee St.
Skaneateles, N.Y. 13152

Debra Folger
222D N. Spruce St.
Batavia, N.Y. 14020

Jane Gent
54A Berry Rd.
Fredonia, N.Y. 14063

Eileen Gerace
154 Summit St.
Batavia, N.Y. 14020

Grace Grimes
69 Hamlet
Fredonia, N.Y. 14063

William Groom
117 Ivory St.
Frewsburg, N.Y. 14738

Rose Gullotti
131 Fulton St.
Jamestown, N.Y. 14701

Grace Hilliker
Box 174
Hanover Rd.
Silver Creek, N.Y. 14136

Marie Hyland
632 Washington Ave.
Dunkirk, N.Y. 14048

Donald Lazarony
21 W. Mosher St.
Falconer, N.Y. 14733

June Lee
71 Oak St.
Batavia, N.Y. 14020

Mary Ann Linberg
5332 West Lake Road
Dunkirk, N.Y. 14048

Nina Lucci
Greco Lane, Apt. 33C
Dunkirk, N.Y. 14048

Karen Lutz
9815 Pine Ave.
Apt. A1
Niagara Falls, N.Y. 14304

Carol Mahoney
146 Eagle St.
Fredonia, N.Y. 14063

Alice Mattingly
760 Westbrook Drive
North Tonawanda, N.Y. 14120

Elizabeth McElhaney
741 Park Avenue
Dunkirk, N.Y. 14048

Violet McKoon
R.D. #1
Falconer, N.Y. 14733

Donna Miller
528 Vine Lane
North Tonawanda, N.Y. 14120

Ellen Munella
302 Charles St.
Jamestown, N.Y. 14701

Marian Palmer
R.D. #2
Ashville, N.Y. 14710

Brenda Peters
95 Lincoln Avenue
Dunkirk, N.Y. 14048

Elnora Peterson
123 N. Dow St.
Falconer, N.Y. 14733

Richard Pond
12 Merriam St.
Falconer, N.Y. 14733

Sandra Schulz
Conewango Rd.
E. Randolph, N.Y. 14730

Mary Schuster
402 Temple St.
Fredonia, N.Y. 14063

Carol Stanton
478 Robbin Hill Rd.
Frewsburg, N.Y. 14738

Marjorie Washburn
614 Roosevelt Ave.
Dunkirk, N.Y. 14048

Velma Wells
Cherry Creek, N.Y. 14723

SUC, Fredonia

Summer Workshop Personnel

John E. Bicknell
Research Professor

John B. Bouchard
Professor of Education

Ronald E. Hull
Associate Research Professor

Matthew Ludes
Assistant Professor of Education

Madan Mohan
Assistant Research Professor

J. Brien Murphy
Assistant Research Professor

Kenneth G. Nelson
Director, Teacher Education Research Center

Thomas A. Petrie
Associate Research Professor

Louis E. Raths
Adjunct Professor of Education

Douglas Rector
Associate Research Professor

William E. Schall
Associate Professor of Education

Joseph V. Totaro
Dean for Professional Studies

Introduction

During the past few years, individualized instruction and individualized learning has received a great amount of attention by educators at all educational levels and on a nation-wide scale (Davies, 1968). The need for the inservice training of school staffs for the systematic implementation of individualization programs has been indicated by Western New York educators. This assertion is based on empirical data which appears in (1) The Southern Tier Educational Planning Study, Report #2, Planning for Change, 1971; and (2) The 1971 Needs Assessment Survey for the Western New York Region.

Owing to national and local interest, a long range study of individualized instruction and learning has been initiated by the Teacher Education Research Center (TERC), the Southwestern New York Association for the Improvement of Instruction and the Education Department, SUC, Fredonia, in collaboration with selected schools and other agencies, e.g., the Wisconsin Research and Development Center for Cognitive Learning. Individualization has been an important part of the TERC mission for five years; TERC has sponsored workshops and inservice staff development activities on a continuing and systematic basis since the summer of 1969.* Much of the success of this workshop is the function of the cumulative experience and skills which the staff has gained in that time.

---

*Workshop reports for the '69, '70, and '71 workshops were made available to the participants, area schools, and college staff by the Teacher Education Research Center.

In keeping with research and development goals of TERC, this workshop has provided vital information for the continuing efforts to support individualized instruction and learning in the Western New York area.

General Objectives

The workshop was designed to:

1. create an awareness of the need for individualized instruction,
2. establish a knowledge of the various components of individualized instruction and their intended uses in the teaching-learning process,
3. acquaint participants with various systems and approaches to individualized instruction,
4. practice some techniques and procedures that have been found to be useful,
5. obtain base-line data upon which an inservice teacher education model may be built,
6. determine, through feedback from the participants, the effectiveness of training modules and other related materials developed by the Teacher Education Research Center, and
7. refine the modules, materials and instruments used in the workshop so that they might be useful in other similar workshops.

The above objectives were purposely stated in general terms in order to leave as much flexibility as possible for participants to pursue their unique interests. Each daily presentation, however, was based on specific objectives which the presenters wished to fulfill. A special effort was made to insure a minimal amount of conflict between goals of the learners and goals of the presenters.

Planning Procedures

Inasmuch as participants in the workshop were selected from school districts which have made a commitment to study and implement modes of individualized instruction, chief school officers of these districts were notified first. They in turn communicated with their staffs concerning enrollment in the workshop. Only those teachers who expressed interest in individualization were selected.

In accordance with the Individualized Instruction and Learning Model, the planning procedures were begun by assessing the participants' backgrounds, interests, and attitudes toward individualized instruction. A questionnaire was mailed to each participant as soon as a tentative list was compiled. Thus, data collection started before registration was complete. Through the Participant Biographical Questionnaire (Appendix A), which was mailed June 1, 1972, interests were identified, levels of sophistication in individualization were ascertained, needs were identified, and

commitment to individualized instruction was sought. Based on this information and interviews with participants individually, alternations in the Coordinators' predispositions as to what should be covered in the workshop began. For example, the development of Individualized Study Units (ISU) by all participants had been planned. It became apparent that relatively few participants were interested in this venture, so, ISU's were made optional.

Questionnaire data indicated, however, that there was a need for the development of a set of common understandings with regard to what individualized instruction is. At this juncture, a number of articles which provided (in the minds of the Coordinators) a logically consistent rationale for individualization were selected and sent to participants. Participants were asked to read the articles and return by mail their reactions in terms of each article's relevance to individualization, the difficulty level of the language, and whether they would recommend the article to colleagues interested in individualized instruction. The following articles received positive reactions and will be used to achieve a common frame of reference to individualization in future workshops: Learning for Mastery by Benjamin S. Bloom; A Model of School Learning by John Carroll; The Impending Instructional Revolution by Harold E. Mitzel; The Plan System for Individualizing Education by John C. Flanagan; and The Pupil Oriented and Individualized System of Education Model (POISE Model) by John B. Bouchard and Kenneth G. Nelson.

Based on data from the preassessment questionnaire other materials such as those produced at the Wisconsin Research and Development Center on Individually Guided Education, and the University of Utah Skills Protocols materials were organized for the workshop. As the program developed, staff were assigned responsibilities for particular areas of instruction. For example, Douglas Rector, TERC's Skills Laboratory specialist, took responsibility for setting up the pre and post-testing and videotaping, the presentation format, and the data collection format for the Utah Protocols area of instruction. Each presenter developed 15-minute pre and post cognitive measures for his presentation; an affective evaluation measure (Appendix B) was also developed to evaluate total workshop effectiveness. A general listing of areas of instruction covered in the workshop is as follows:

1. Overview of Individualized Instruction
2. Curriculum Adjustment for Individualized Instruction
3. Skills Training
4. Objectives for Individualized Instruction
5. Organization for Individualized Instruction
6. Systems of Individualized Instruction with special emphasis on Individually Guided Education (IGE)
7. Motivation for Individualized Instruction
8. Grouping and Scheduling for Individualized Instruction
9. Assessment and Reporting for Individualized Instruction.

The preassessment instrument was effective in ascertaining special concerns of the participants as they embarked upon the individualization workshop. Concerns expressed by participants provided a basis for the formation of interest groups during the workshop. Generally speaking, mornings were devoted to the structured presentations by workshop staff; afternoons were usually open for interest sessions. Participants' interests varied greatly, however, there was a high degree of commonality in the following areas:

1. Organizing the self-contained classroom for individualized instruction.
2. Developing Individualized Study Units - units were developed in a number of curricular areas for both elementary and high school classes.
3. Developing student interview schedules.
4. Individually Guided Education in the Multiunit School - Elementary (IGE/MUS-E).

Criteria for Grading Workshop Participants

The criteria was developed in consultation with the workshop staff and participants. It was cooperatively decided to give a grade B to all those participants who satisfied the following criteria:

1. Participation, e.g., attendance, involvement in activities, and the like.

2. Completed assignments, e.g., turns in questionnaire, takes both pre and post-cognitive tests, and the like.
3. Showed growth in understanding of individualized instruction as measured by pre and post test scores.

Grade A was given to all those participants who, besides satisfying the above criteria, also showed:

1. Mastery: An 80% average or higher on post-test cognitive measures.
2. Evidence in writing of having completed a product* in which the participant has set the goals and which contributes to his or her efforts to individualize instruction.

*Examples of Products:

1. Organize a set of data about individual students.
2. Develop an Individualized Study Unit.
3. Develop an annotated bibliography on some aspect of individualization.
4. Develop a rescheduling plan for your situation.
5. Develop a students' interview schedule.
6. Develop role descriptions in an individualized situation.
7. Plan a study, project or an activity supportive of individualization.
8. Plan a set of optional activities on an interest basis for classroom use.
9. Develop a plan for peer tutoring for your unique situation.

Operational Procedures

Below is a daily account of the workshop activities. It will be noted from this account that besides selecting only interested participants, the inservice teacher education model provided: (1) models for new behaviors by showing films and videotapes of teachers who are actually applying the techniques in the classroom; (2) films, videotapes and visual examples; (3) outside expert help to discuss ways of using methods; (4) instruction in small steps; (5) testimonials from teachers who have used techniques and are successful; and (6) sound learning principles.

Monday, July 24

After a brief welcome by Joseph V. Totaro, Dean for Professional Studies, and Kenneth G. Nelson, Director of TERC, John B. Bouchard administered the pretest for his presentation, Overview of Individualized Instruction.

John B. Bouchard then gave the keynote presentation in which he described the activities to come and the participants' evaluation process. After a brief question and answer period the Overview of Individualized Instruction* module was presented. This module, which includes a tape/slide presentation with accompanying written materials, provided basic principles, obstacles, and alternatives regarding individualization.

---

*Written materials, tape/slides, and videotapes used in the workshop are listed in Appendix C.

Subsequent to a 15-minute break (coffee and pastries were provided for each morning break), J. B. Bouchard led the discussion of the module. The post-test was then administered and discussed. This activity concluded the morning session.

In the afternoon session, most participants went with Douglas Rector for an introduction to the Fredonia Skills Laboratory. While there, Doug Rector initiated the first phase of the skills training experiment by asking participants to prepare to teach a colleague a mini-lesson which was to be videotaped. This videotape of a short tutoring session (videotaped the next day) served as the pre-test measure of "Encouragement" behavior which was the treatment skill to be introduced two days hence.

A few participants who did not volunteer for the "Encouragement" skill experience spent the afternoon in individual consultation with Ronald Hull and Madan Mohan. This time was spent exploring the alternatives for their individual projects.

A number of areas had been set up for viewing materials on individualization; some used the materials to get ideas for projects. For example, materials were available on various systems of individualization, Wisconsin Research and Development Center materials on the Wisconsin Design for Reading Skill Development (WDRSD), and a reference library with books on objectives, Individualized Study Units, and the like, was used.

At 2:30 p.m., all participants reconvened in one group to take the pre-test on Curriculum which was the area of study for the second day of the workshop.

The Suggestion Box which had been placed in the large meeting room had begun to yield valuable suggestions. Alterations in workshop format were made daily throughout the workshop as suggestions came in.

Tuesday, July 25

After brief announcements by Ronald Hull, John B. Bouchard presented the Curriculum Strategies for Individualizing Instruction module. The presentation comprised a tape/slide presentation with accompanying written reinforcement materials. Discussion followed the presentation. After a 15-minute break, discussion of the module continued for a few minutes. J. B. Bouchard then administered the post-test on the Curriculum presentation. The post-test was discussed prior to breaking for lunch.

After lunch the skills training group went to the Skills Laboratory where they were videotaped in tutoring situations. These tapes served as the pre-test for the Utah Protocols treatment to be presented the next day. Other workshop participants worked in interest groups or individually on their projects with help from workshop staff.

Wednesday, July 26

Announcements were followed by Kenneth G. Nelson's introductory statements regarding skills training and its relationship to individualized instruction. Douglas Rector then presented the University of Utah Protocol Materials on the skill of "Encouragement." After the morning break, all participants spent the remainder of the morning working through written materials which supported the development of "Encouragement" in the classroom.

In the afternoon, participants completed the "Encouragement" exercises and took the written post-test. Participants finished the post-test at different times. At 2:30 all workshop participants reconvened for the pre-test on objectives which was the content area to be covered on Thursday, July 27.

Thursday, July 27

Announcements were followed by a presentation on instructional objectives by John E. Bicknell. A discussion period ensued before the morning break. After the break a videotape, "Objectives," featuring W. James Popham was shown. The group then discussed the videotape before adjourning for lunch.

After lunch, participants worked in small groups developing instructional objectives. They were subsequently brought back together for discussion before the post-test was administered.

For the last activity of the day, a pre-test on organization was administered by Thomas A. Petrie.

Friday, July 28

After announcements, Thomas A. Petrie presented his training module, Organization for Individualized Instruction. This tape/slide presentation dealt with organizational variables of time, space, subject matter, personnel and resources. The presentation was especially geared to reorganizing the self-contained classroom for individualized instruction. After a break, a discussion of values upon which organizational decisions are made ensued. Tom Petrie administered the post-test before lunch.

In the afternoon small interest groups worked on Individualized Study Units, classroom organization, and some viewed the module on Differentiated Staffing with Ronald Hull.

The pre-test on Individually Guided Education was administered by Ronald Hull as the last activity of the day.

Monday, July 31

The Individually Guided Education presentation opened with the film, "IGE For All Children." The group was then divided into three subgroups on the basis of participants' interest, commitment to IGE concepts, and level of sophistication regarding implementation of IGE concepts in their respective schools. One group, Falconer Central School staff members, led by Don Lazarony discussed the IGE Model as it is being implemented in Falconer Elementary School;

another group led by John Bouchard, discussed the IGE Model from the vantage point of readiness to enter the IGE system; and the third group, led by Madan Mohan, discussed IGE in terms of its applicability to their particular situations and also certain weaknesses they perceived in the Model. After a break, J. Brien Murphy presented the Wisconsin Design for Reading Skill Development (WDRSD) followed by William Schall's presentation of Wisconsin's Developing Mathematical Processes (DMP) program. Both of these sets of curricular materials were developed to support the IGE Model. Each workshop participant received a Specimen Set of WDRSD materials. The post-test on IGE was given before lunch.

The afternoon was devoted to interest group sessions; one group chose to view the videotapes on "Goal Setting" and "Individualized Reading Conferences," both of which are part of the Wisconsin Research and Development Center's materials which support the IGE Model.

At 2:30 a feedback session was conducted and Madan Mohan gave the group the pre-test on Motivation.

Tuesday, August 1

A number of participants (Falconer kindergarten, grades 1 and 2 teachers) attended William Schall's DMP workshop which was held for two days (August 1 and 2) simultaneous with the Individualized Instruction Workshop.

After announcements Madan Mohan presented the Motivational Proced res module. The presentation was comprised of a tape/slide showing and supportive printed materials. Discussion followed the presentation. A break was followed by a demonstration of motivational techniques, e.g., "Klinks and Klanks." Madan Mohan then administered the post-test; a discussion of the post-test brought the group to the lunch break.

In the afternoon, Madan Mohan presented the training module on Peer Tutoring. Like the other training modules, a tape/slide showing was accompanied by supportive written materials. After the Peer Tutoring presentation was finished, some participants worked on individual projects; others participated in free discussion in small groups. A group which was especially interested in individualizing social studies attended a session conducted by Matthew Ludes who volunteered his services to the workshop at the request of a number of participants.

At 3:00 the group reconvened for a short feedback session.

Wednesday, August 2*

Again, Falconer K, 1, and 2 teachers attended the DMP Workshop. This day was devoted to Grouping and Scheduling for Individualized

---

*The final three days of the workshop schedule were completely rearranged in order to accommodate to interests of the participants.

Instruction. Mohan and Hull showed a videotape which they had edited. The tape featured the Falconer Central School, North Side Elementary, Primary Unit with Mrs. Lucy Mula acting as Unit Leader. The tape focused on unit decision-making and dealt with a specific reading problem. The tape was discussed.

After a break, Madan Mohan divided the group into subgroups for a simulated grouping activity. The Wisconsin Research and Development Center's McBee Cards were used to simulate the placement of a pool of multi-age-graded pupils into developmental reading skills groups. This activity linked into the implementation of the Wisconsin Design for Reading Skills Development (WDRSD) program.

After the simulation activity, a general discussion of grouping and scheduling ensued. At 2:30 John Bicknell administered the pretest on Assessment and Reporting. A short feedback session preceded dismissal.

Thursday, August 3

After announcements, part of the group, led by Madan Mohan, traveled to the Chautauqua County BOCES to view two videotapes, "What's New at School?" and "What Did You Learn At School Today?" The remainder of the participants were presented the training module, Selected Systems of Individualized Instruction by Ronald Hull. A discussion of Selected Systems preceded lunch.

In the afternoon, most workshop participants participated in the last phase of the skills training experiment with each videotaping a short tutoring session which served as the post-test on "Encouragement." The few who chose not to be involved in the skills training experiment worked on individual projects.

Friday, August 4

The morning session was devoted to John Bicknell's presentation on Assessment and Reporting. This presentation is in an early development stage and will provide the content for a training module. A discussion followed the presentation; after a break, participants worked at linking assessment and reporting procedures to objectives they had written earlier in the workshop.

As a result of many requests to see and hear about the Thinking Box (Raths, et al, 1971). Louis Raths was invited to present the Thinking Box in the afternoon. Dr. Raths explained the levels of thinking which the materials help to stimulate and he also displayed the materials contained in the Box. After a discussion session, the Workshop Evaluation Form was administered to the group. The workshop terminated at 3:30 p.m.

Results

The Participant Biographical Questionnaire information was summarized in terms of interests, needs, levels of sophistication and commitment to individualization. Participants' background

information revealed that 46% had Master's degrees and 54% Bachelor's degrees; 54% had majored in Elementary Education, 16% in Social Studies, 3% in Special Education, 3% in Science, 6% in English and 16% in Educational Administration; 83% had received no special training in individualized instruction; and 90% expressed their positive commitment to individualized instruction.

The major problems that reduce the effectiveness of the school were identified by the participants to be factors in home and school. Some of the home related factors were: poor socio-economic status of parents, lack of interest in the child's education, lack of co-operation with school and negative attitudes toward education on the part of the parents. School related factors listed were: inadequate supply of materials, lack of support of administration, rigid schedules and teacher incompetence. In order to carry out their responsibilities more effectively, the participants suggested that the workshop should focus on the following:

1. How to individualize instruction?
2. How to properly diagnose learning difficulties?
3. What are some of the best instructional materials and methods which will enable most of the students to achieve mastery in the basic skills?
4. How to write and classify objectives?
5. How to motivate each student to learn and be more inquisitive about the world around him?

6. How to group children effectively to meet their individual needs?
7. How to schedule time more effectively? and
8. How to get co-operation from other teachers in the school?

As was mentioned earlier, 15-minute cognitive pre- and post-tests were developed for each content area offered in the workshop. The results of the pre-tests were used to alter the large group presentations to fit the needs of the group. It was also determined that 80% correct responses on the post-tests would constitute mastery. Owing to error detected in some tests, the mastery level was subsequently lowered to 75% for grading purposes. Table 1 indicates the number of participants at different mastery levels after large group presentation and discussion. The mastery level of the participants was determined by their post-treatment scores on criterion-referenced tests in each area of presentation.

Results in Table 1 indicate that the participants achieved more cognitive mastery in some areas than others. Specifically, the mastery in the areas of 'Overview,' 'Curriculum' and 'Skill' was at or beyond 75 percent level. However, in other areas, a number of participants need further help to acquire mastery. Some of the possible reasons for these differential results are discussed in the next section.

TABLE 1

Frequency Distribution of Mastery Level in
Different Content Areas of Inservice Teachers (N = 37)

Mastery Level	Overview	Curriculum	Skills	Objectives	Organization	IGE	Motivation	Assessment Evaluation
Below 60%	0	0	0	10	0	5	5	10
60-65	5	0	0	5	5	5	6	5
65-70	17	0	0	7	4	5	2	7
70-75	7	2	0	9	6	8	9	7
75-80	4	1	0	3	13	5	7	4
80-85	4	2	2	2	7	5	3	4
85 and above	0	32	34	1	0	4	5	0

The frequency distribution when the results were summarized over all the content area is given in Table 2.

TABLE 2

Frequency Distribution of Mastery Level of Participants on Composite Scores (N = 37)

Mastery Level	No. of Participants
Below 65%	1
65-70	4
70-75	8
75-80	12
80-85	11
85 and above	1

From Table 2, it is noted that 64% of the participants achieved the mastery level of 75% or above on the post-tests. Of the 36% with mastery level below 75%, 22% were at mastery level between 70 to 75; 11% between 65 to 70; and 3% below 65%. These results clearly showed that the workshop was effective in changing the cognitive behavior of most of the participants. Whether the knowledge acquired in the workshop is translated into changes in teacher behavior in the classroom is not within the scope of the present study. However, this is the problem to which the staff at the Teacher Education Research Center will pay attention in future research and development activities

TABLE 3

Summary of Participants' Reaction to Workshop Experience

Item	Highly Satisfied	Satisfied	Not Satisfied
1. The extent to which the workshop staff knew their subject matter.	35	1	0
2. The workshop staff's enthusiasm for their presentations and materials.	34	2	0
3. The workshop staff's skill at communicating important information in their presentations.	24	12	0
4. The workshop staff's use of creative techniques of teaching.	14	9	13
5. The workshop staff's sense of humor and rapport with participants.	30	5	1
6. Did the workshop staff demonstrate fairness, open-mindedness, a constructive and progressive attitude towards other people and issues?	31	5	0
7. The workshop staff's ability to answer questions comprehensively and clearly.	31	4	1
8. The extent to which the workshop staff stimulated you, aroused your curiosity, your motivation for individualized instruction.	29	5	1

Item	Highly Satisfied	Satisfied	Not Satisfied
9. The workshop staff's ability to stay within time limits.	26	6	4
10. The workshop staff's attitude and "public relations" skill.	35	1	0
11. The quality of instructional facilities.	23	10	1
12. The degree to which the workshop goals were accurately expressed to you in advance.	25	9	2
13. The extent to which the stated purposes of the workshop were accomplished.	25	3	2
14. Agreement between expressed goals and objectives and what actually happened at the workshop.	26	5	2
15. The relevance, usefulness, or applicability of the workshop for your purposes.	29	5	2
16. The contribution of the workshop to your professional growth.	31	5	0
17. The contribution of the workshop to your affective growth.	26	9	0
18. The adequacy of film presentation and other audio-visual facilities.	31	3	2

Table 3 summarizes the general reaction of the teachers to the total workshop experience. It is noted that the teachers generally expressed satisfaction with their workshop experience and said that it met their needs.

An analysis of responses to item 4 of the questionnaire pointed out that a large percentage of participants felt that the morning session of large group presentation should have been changed to individual and/or small group mode in the case of certain presentations. In view of the efforts of the staff to provide for a participant-centered flexible program, the staff could not stay within time limits and this has been reflected in the response to item 9. However, it was stated by the participants that "staying within time limits is not always desirable, such is the case here." Some of the reactions were:

> I believe objectives on individualization were met; by sending out the advanced papers I felt that there was a definite organized technique; workshop was well systematized and showed much planning; enjoying workshop-appreciated help; I must say, I am so pleased I participated in this as it suits my needs exactly. This is the type of thing everyone should have to take; the course certainly needed in this area if schools are going to move in the direction of individualization.

Discussion

The Participant Biographical Questionnaire revealed that 83% of the participants had received no special training in individualized instruction. However, they were eager to know about methods, materials and activities that have been found to be useful in the individualization of instruction. Such a positive perception of the goals and methods of individualized instruction is very essential for the successful implementation of the new program. In fact, Butts (1967) identified this positive commitment as one of the essential competencies and states:

> Innovations require implementation by individuals who know and accept both the new philosophical orientation and the changed goals of the teacher and student.

As stated earlier, the "educational events" of the workshop focused on the topics identified by the participants to be their areas of concern. Such a strategy was adopted to make the workshop program relevant to the needs of the participants. Attitudinal data in Table 3 clearly indicates a possible relationship between positive attitudes and participants' perceptions of relevance. The total workshop experience was considered to be highly beneficial by the participants. However, to make the workshop program better, certain aspects of it were recommended to be changed. Some of these suggestions were: (1) more individualization techniques for self-contained classroom teachers; (2) more

small interest groups; and (3) more exploration of curriculum materials in various subject areas.

It is noted from Table 2 that the first three objectives of the workshop; namely, (1) to create an awareness of the need for individualized instruction, (2) to establish a knowledge of the various components of individualized instruction and their intended uses in the teaching-learning process, and (3) to acquaint participants with various systems and approaches to individualized instruction, were realized for 64% of the participants at a mastery level of 75% or above on the composite post-tests scores. However, there were 36% of the participants who could not achieve the mastery level. Table 1 indicates that certain aspects (Overview, Skill, Curriculum) of the workshop program were of almost equal benefit to individuals at various levels of formal education and teaching experience, while other aspects (Objectives, Organization, IGE, Motivation, and Assessment/Evaluation) were not of equal benefit. If most students can master what we have to teach them, it is our task to determine what aspects of the workshop did not help the 36% of the participants to achieve the mastery level. Participants' highly positive reactions in Table 3 reveals that the materials, methods, activities, and workshop personnel were not the factors which precluded attainment of the mastery level.

Perhaps explanations lie in the individual differences in the amount of time required by learners to attain mastery of learning tasks (Carroll, 1963), and the complex nature of some presentations (which should have been divided into component understandings each of which should have been learned separately). These findings have implications for future research and development activities and future workshop offerings. It seems that the staff must pay special attention to participants' variance in rate of learning the various concepts of individualized instruction and also some presentations will need to be altered in order to divide the content into sequential components for easier understanding.

The reactions of the participants to the training modules and other related materials developed by the Teacher Education Research Center were of special interest for our research and development activities. These reactions should betaken into consideration to refine the products so that they may be useful in other similar workshops.

From Table 3, it is found that 84% of the participants were highly satisfied with the materials and tape/slide modules developed at the Teacher Education Research Center. In fact, the participants considered modules and a list of readings as one of the "four most helpful things about the workshop" and not a single participant included modules or a selected list of readings among the "four least helpful things about the workshop." In summary, the analysis

of data show that a great deal of cognitive learning occurred in the workshop and the participants, through their positive reactions to modules and list of readings, revealed that the research and development activities of the Teacher Education Research Center are headed in the right direction and should be continued.

The successful implementation of the workshop would seem to suggest the following inservice teacher education model. The model may be divided into three parts:

1. Planning. For the inservice workshops/institutes: (a) only those participants should be selected who are committed to the rationale and objectives of the workshop. It is hoped that such a selection will have a 'ripple effect' when these participants go back to their school after the workshop experience; (b) send in advance a questionnaire to each participant to assess backgrounds, interests, and attitudes toward the objectives of the workshop. This data should be used in organizing the activities, content, method, and materials for the workshop; (c) send in advance materials and suggest relevant references so as to give each participant a philosophical orientation; (d) ask for participants' reactions to materials they received and set a time limit when the reactions are to be returned to workshop staff; and (e) form small groups based on interest or content or need.

2. Conduct of Workshop: (a) divide the day into two sessions - a large group presentation in which the objective should be to provide participants some common understandings. This presentation should be followed by discussion, comments, suggestions, evaluation to get feedback from the participants; small group presentations to cater to the needs and interests of various groups. These presentations should also be followed by evaluation to get feedback; (b) provide a suggestion box into which participants may submit their suggestions on how to make the workshop better. Such a step is very useful as it offers opportunity to those participants who may not like to voice their concerns in the presence of others or who would like to be anonymous; (c) pre-test the participants for each large group presentation; (d) provide models of new behavior. This should be done by bringing in teachers who are using techniques in their classrooms, outside experts who have been doing work in this area, and by showing films, videotapes, visuals and tape/slide presentations; (e) use sound learning principles; namely, active participation, small steps of instruction, immediate feedback, reinforcement, opportunity to practice new skills and individualization; and (f) evaluate the program.

3. Post-Workshop Experiences. What happens to the teachers when they return to their respective schools and apply those understandings, skills and behaviors which they learned in the workshop is very important. Some of the consequences which may reinforce their behaviors are: (a) improved performance of children; (b) more positive and pleasant learning environment; (c) feedback and recognition from school administrators, teachers and parents; and (d) recognition by presenting a program on individualized instruction to others.

Suggestions for Future Activities

The evaluation of the workshop has clearly indicated that the objectives of the workshop were achieved. As the participants have indicated their full support of the objectives, activities, materials and methods of the workshop, it is suggested that:

1. Workshops on individualized instruction should be offered to area educators on a regular basis.
2. The staff of the Teacher Education Research Center should be encouraged to continue their research and development endeavors in the area of individualized instruction.

3. The development of modules in the area of individualized instruction should continue to receive support from the college administration.
4. A concerted effort should be made to develop another series of protocols in the areas of concerns of the teachers.
5. The training needs of teachers for the effective implementation of the individualized instruction programs be determined.
6. The list of readings relevant for the individualized instruction programs should be identified and developed.
7. The feasibility of the inservice teacher education model suggested in the present workshop should be tested in the future workshops.
8. A follow-up study be attempted with the participants to ascertain: (a) workshop application that they are making in the schools this year, and (b) the general feelings about the workshop now that they have had a chance to try to implement some of the things discussed during the summer workshop.

REFERENCES

Butts, David P. The Classroom Experience Model. In Bessent, E.W. (Ed.) Design for Inservice Education. Austin, Texas: The Research and Development Center for Teacher Education at the University of Texas, 1967.

Carroll, John. A model of school learning. Teachers College Record, 64, 1963.

Davies, Don. Address to the AACTE School for Executives. Ashland, Oregon; August 22, 1968.

Raths, Louis, Wassermann, Jack and Wassermann, Selma. The Thinking Box. Westchester, Ill.: Benefic Press, 1971.

Southern Tier Educational Planning Study, Planning for Change, Report #2. Olean, New York: Western New York School Development Council, 1971.

State Education Department, Needs Assessment Survey, 1971. Albany, New York: The State Education Department, 1971.

MM/REH/cah

Appendix A

PARTICIPANT BIOGRAPHICAL QUESTIONNAIRE

A. Personal

1. Name _____
   Last First Initial
2. School Address _____
3. Home Address _____

B. Professional

4. What is the highest earned college degree you hold? _____

5. What was your major field of study in undergraduate school? If you had two majors, write both. _____

6. What is the name/location of the institution where you took most of your undergraduate college courses? _____

7. How many credits of college work have you had beyond your highest degree? _____

8. By the end of this school year, what is the total number of years of full-time teaching experience you have had? _____

9. Have you ever attended any summer institutes sponsored by any federal/state agency? Yes ___ No ___

10. Have you ever attended any summer institutes or comparable training programs that offer special training in individualized instruction? Yes ___ No ___

11. Suppose you could go back in time and start college again, in view of your present knowledge, would you enter the teaching profession? Yes ___ No ___

12. What type of class do you most like to teach: (a) gifted, (b) average, (c) below average, (d) mixed group, (e) no preferences

13. Are you a member of any teachers' assocation? Yes___ No ___

14. What do you think to be the problems that reduce the effectiveness of the school? _____

_____

_____

15. What do you feel to be your most important need(s) in carrying out your educational responsibilities? _____

16. What are some of the tasks you would like us to cover during the workshop?

_____

_____

_____

_____

_____

17. What is the grade/level you teach? _____

18. What is the content area you teach? _____

19. How do you describe your present position: (a) teaching, (b) administration, (c) other (specify) _____

20. Your suggestions for the workshop.

Appendix B

EVALUATION OF WORKSHOP ON INDIVIDUALIZED INSTRUCTION

Directions: We will appreciate it very much if you will take the few minutes it will require to complete this form and return it to us. Please answer every question applicable to your participation, even if it seems difficult to make a choice. Make your choice on the basis of the best information available to you. Try to assess your general feelings and reactions, rather than allowing one instance to influence your thinking entirely. Please provide us with a frank appraisal of the workshop as it will help us in reviewing our efforts and in planning for our future activities. Read each statement carefully, and decide how you would evaluate the workshop on that criterion. Use the 3-point rating scale, by circling one number for each item, as follows:

1 - if it was poor or unsatisfactory;

2 - if it was good, but not outstanding;

3 - if that aspect of the workshop was excellent or outstanding, extremely good or very well done.

Spaces are provided for written comments at various places; feel free to write in your ideas and suggestions.

1. The extent to which the workshop staff knew their subject matter. 3 2 1
Comments: _____

_____

2. The workshop staff's enthusiasm for their presentations and material. 3 2 1
Comments: _____

_____

3. The workshop staff's skill at communicating important information in their presentations. 3 2 1
Comments: _____

_____

4. The workshop staff's use of creative techniques of teaching. 3 2 1
Comments: _____

_____

5. The workshop staff's sense of humor and rapport with participants. 3 2 1
Comments: _____

_____

6. Did the workshop staff demonstrate fairness, open-mindedness, a constructive and progressive attitude towards other people and issues? 3 2 1
Comments: _____

_____

7. The workshop staff's ability to answer questions comprehensively and clearly. 3 2 1
Comments: _____

_____

8. The extent to which the workshop staff stimulated you, aroused your curiosity, your motivation for individualized instruction. 3 2 1
Comments: _____

_____

9. The workshop staff's ability to stay within time limits. 3 2 1
Comments: _____

_____

10. The workshop staff's attitude and "public relations" skill. 3 2 1
Comments: _____

_____

11. The quality of instructional facilities. 3 2 1
Comments on items 10 and 11: _____

_____

12. The degree to which the workshop goals were accurately expressed to you in advance. 3 2 1

13. The extent to which the stated purposes of the workshop were accomplished. 3 2 1

14. Agreement between expressed goals and objectives and what actually happened at the workshop. 3 2 1
Comments on items 12-14: _____

_____

15. The relevance, usefulness, or applicability of the workshop for your purposes. 3 2 1

16. The contribution of the workshop to your professional growth. 3 2 1

17. The contribution of the workshop to your affective growth. 3 2 1

18. The adequacy of film presentations and other audio-visual facilities. 3 2 1

19. The four or five things about the workshop which were most helpful. 3 2 1
Comments: _____

_____

20. The four or five things about the workshop which were least helpful. 3 2 1
Comments: _____

_____

21. If you were to change the workshop in any way, to make it better for everyone, what changes would you make? 3 2 1
Comments: _____

_____

Appendix C

MATERIALS USED IN THE WORKSHOP

A. Articles and Papers

1. Bicknell, John E. Pupil assessment in individually guided education. Fredonia: Teacher Education Research Center, State University College, Fredonia, New York.

2. Bloom, Benjamin S. Learning for mastery. Evaluation Comment, Vol. 1, No. 2. Los Angeles, California: Center for the Study of Evaluation of Instructional Programs, University of California, May 1968.

3. Borg, Walter R. Encouragement: a language concept related to effective teaching. Logan, Utah: Utah State University, 1972.

4. Bouchard, John B. and Nelson, Kenneth G. A pupil-oriented and individualized system of education (POISE Model). Fredonia: State University College, Fredonia, New York.

5. Carroll, John B. A model of school learning. Teachers College Record, LXIV, 1963.

6. Flanagan, John C. The Plan system for individualizing education. Measurement in Education, Vol. 2, No. 2, January 1971.

7. Hull, Ronald E. and Mohan, Madan. The individualized study unit. Fredonia: Teacher Education Research Center, State University College, Fredonia, New York.

8. Mitzel, Harold E. The impending instruction revolution. Phi Delta Kappan, LI, No. 8, April 1970.

9. Mohan, Madan. Motivational procedures in the individualization of instruction. Fredonia, New York: Teacher Education Research Center, State University College, 1971.

10. Petrie, Thomas A. Organization for individualization in the self-contained classroom. Fredonia: Teacher Education Research Center, State University College, Fredonia, New York.

B. Books

1. Bloom, Benjamin S. et al. Taxonomy of educational objectives: handbook I, cognitive domain. New York: David McKay Company, Inc., 1956.

2. Hunt, David E. Matching models in education. Toronto: The Ontario Institute for Studies in Education, 1971.

3. Instructional Objectives Exchange. A series of books on objectives and test items. Los Angeles, California: Instructional Objectives Exchange, 1971.

4. Klausmeier, Herbert J., et al. Individually guided education and the multiunit elementary school: guidelines for implementation. Madison, Wisconsin: Wisconsin Research and Development Center, University of Wisconsin, 1971.

5. Klausmeier, Herbert J., et al. Individually guided motivation: guidelines for implementation. Madison, Wisconsin: Wisconsin Research and Development Center, University of Wisconsin, 1972.

6. Lewis, James Jr. Administering the individualized instruction program. West Nyack, New York: Parker Publishing Company, Inc., 1971.

7. Mager, Robert F. Preparing instructional objectives. Palo Alto, California: Fearon Publishers, 1962.

8. Noar, Gertrude. Individualized instruction. New York: John Wiley and Sons, Inc., 1972.

9. Otto, Wayne, et al. The wisconsin design for reading skill development: rationale and guidelines. Minneapolis, Minnesota: National Computer Systems, Inc., 1970.

10. Raths, Louis E. Teaching for learning. Columbus, Ohio: Charles E. Merrill Publishing Company, 1969.

11. Romberg, Thomas. Developing mathematical processes. Madison, Wisconsin: Wisconsin Research and Development Center, University of Wisconsin, 1970.

12. Sefein, Naim A. Meaningful instructional objectives. Memphis, Tennessee: Bureau of Educational Research and Services, College of Education, Memphis State University, 1971.

13. Tyler, Ralph W. Basic principles of curriculum and instruction. Chicago: The University of Chicago Press, 1970.

C. Tape/Slides, Videotapes and Films

1. Tape/Slides

   a. Overview of Individualized Instruction
   b. Curriculum Strategies for Individualization
   c. Organization of Individualized Instruction
   d. Differentiated Staffing
   e. Motivational Procedures for Individualizing Instruction
   f. Selected Systems of Individualization
   g. Organizing Peer Tutoring in Our Schools

2. Videotapes

   a. Objectives
   b. What's New at School?
   c. What Did You Learn at School Today?
   d. North Side Primary Unit Meeting
   e. Kennedy Intermediate Unit Meeting
   f. Goal Setting
   g. Individual Reading Conference

3. Films

   a. IGE For All Children
   b. Why Does Man Create?
   c. Dance Squared

Appendix D

LETTERS TO PARTICIPANTS

STATE UNIVERSITY COLLEGE • FREDONIA, NEW YORK 14063

TEACHER EDUCATION RESEARCH CENTER

May 2, 1972

Dear

Please announce to your elementary faculty that a two-week workshop in Individualized Instruction taught by Drs. Hull and Mohan will be offered from July 24 through August 4, 1972. The workshop carries 3 hours of graduate credit and is listed under Ed. 590. The current class bulletin for the summer session does not indicate the times and dates of the workshop. The workshop hours will be from 8:00 a.m. to 3:00 p.m.

We are sending this special announcement only to school districts which have indicated to us a commitment to individualized instruction. Please direct interested staff members to contact either Dr. Hull or Dr. Mohan for entry into the course. We may be reached by phone at 673-3219 or by mail at TERC, Old Main Building, SUC Fredonia, New York, 14063.

It may be emphasized to the interested faculty that the last date for registration is May 8, 1972.

Sincerely,

Ronald E. Hull
Assistant Professor - Research

Madan Mohan
Assistant Professor - Research

REH/MM/mta

STATE UNIVERSITY COLLEGE • FREDONIA, NEW YORK 14063

TEACHER EDUCATION RESEARCH CENTER

June 1, 1972

Dear Participant:

We are glad to know that you are planning to participate in the Ed. 590 workshop on Individualized Instruction to be offered by the State University College at Fredonia from July 24 to August 4, 1972. We are looking forward to meeting you.

The purpose of the workshop is to create an awareness of the need for individualized instruction, to establish a knowledge of the various components of individualized instruction and their intended uses in the teaching-learning process, to acquaint you with various systems of individualized instruction and to suggest techniques and procedures that have been found to be useful.

In order to effectively plan the activities for the workshop, it is important that we know each participant's background, interests, and attitudes. The questionnaire which is attached with this letter attempts to accomplish just that. We are sure that your answers to questions will be accurate and frank. From our side, we assure you that your answers will remain completely confidential.

On the basis of information received through questionnaires, we will be able to form small groups indicative of participants' field of interest and level of readiness. These small interest groups will meet every afternoon throughout the session and accomplish the following: (1) participate in an in-depth study of their areas of interest, and (2) develop an individualized study unit. We plan to reserve the morning sessions for large group presentations, discussions and simulations. Of course, we may change this format after interaction with you on the first day.

Page 2
June 1, 1972

We are glad to inform you that we are trying to get all the participants registered by mail. You will be sent necessary forms for registration by mail. Many of our colleagues have agreed to be resource persons for the participants during the afternoon sessions. You will be informed of their names and areas of specialization on the first day.

Besides the questionnaire and the paper, The Individualized Study Unit, we are sending two papers for you to study and to return by mail your reactions to these papers within ten days. The papers are: Learning for Mastery by Benjamin S. Bloom and A Model of School Learning by John Carroll. Your reactions should cover the relevance of the papers for the course, the difficulty level of the language and whether you recommend it to other colleagues interested in individualized instruction.

In the next letter, we will send a few more papers for you to read and suggest a list of books for background reading.

Sincerely,

Madan Mohan, Ph.D.
Assistant Professor - Research

Ronald E. Hull
Assistant Professor - Research

MM/REH/mta

Attachment

Encs.

P.S. Save these materials for use in the workshop sessions.

STATE UNIVERSITY COLLEGE • FREDONIA, NEW YORK 14063

TEACHER EDUCATION RESEARCH CENTER

June 15, 1972

Dear Participant:

A very small number of the participants have not yet responded to our letter of June 1, 1972. If you are one of them, may we suggest to you to expedite the reply.

As mentioned in the previous letter, we are sending you the following three papers:

(1) A Pupil-Oriented and Individualized System of Education
(2) The Plan System for Individualizing Education
(3) The Impending Instruction Revolution.

Please send your reactions to these papers within the next fifteen days. Your critique of these papers should follow the format suggested in our first letter.

In the next letter, we will send a few more papers for you to read.

Sincerely,

Madan Mohan, Ph.D.
Assistant Professor - Research

Ronald E. Hull, Ed.D.
Assistant Professor - Research

MM/REH/mta

Encs.

P.S. Save these materials for use in the workshop sessions.